

Remarks/Arguments:

Introduction

Claims 31-65 are pending. Claims 1-30 have been canceled. Claims 34, 39, 47 and 55 are withdrawn. Claims 31, 45 and 56 have been amended to include the limitations of claim 41, 51 and 63, respectively. Following the amendments to claims 31, 45 and 56, claims 41, 51 and 63 have been amended to state that the polyethylene glycol diacrylate consists essentially of polyethylene glycol diacrylate having a molecular weight between 700 and 800. No new matter has been introduced with these claim amendments. Entry of the claim amendments is respectfully requested.

Section 103 Rejections

Claims 31-33, 35, 36, 40-46 and 50-54 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2001/0029349 to Leschinsky (hereinafter "Leschinsky") in view of U.S. Patent No. 6,958,212 to Hubbell et al. (hereinafter "Hubbell"). Applicants respectfully traverse.

Leschinsky discloses that a solution of glutaraldehyde or carbodiimide which is used to strengthen an aneurismal wall by crosslinking with the collagen within the wall, as follows:

The purpose of the chemical solution is to strengthen aneurysmal wall 23 by actually changing the nature of the wall 23, i.e. crosslinking the collagen in the wall 23. ... [T]he preferred solutions are aldehydes and especially glutaraldehyde.... Another possible crosslinking agent is carbodiimide.... (Leschinsky, paragraphs [0042] - [0043])
(emphasis added)

Thus, Leschinsky teaches a specific solution, i.e., a solution of glutaraldehyde or carbodiimide, which is to be introduced into a bodily lumen to interact with the collagen within an aneurismal wall. Leschinsky, however, fails to teach or suggest that its chemical solution of

glutaraldehyde or carbodiimide is in itself a curable embolic material. Indeed, Leschinsky specifically describes that its chemical solutions are to interact with a vessel wall, but are not curable by themselves, as they are to be removed from the bodily lumen, as follows:

[A] chemical solution, preferably glutaraldehyde, other examples of which were described and listed in reference to first and second embodiments, is pumped through tube 150, infusion/vacuum lumen 132 and port 152 into treatment chamber 41. As indicated above the chemical solution actually changes the nature of wall 22. Next, the chemical solution is pumped out of port 152, through infusion/vacuum lumen 132, and out tube 150. The flushing and chemical solution infusion cycles may be repeated as necessary. ... Following treatment with the chemical solution another flushing solution may be employed to remove excess chemical solution from treatment chamber 41. (Leschinsky, paragraph [0050], lines 10-26) (emphasis added)

Thus, Leschinsky specifically teaches a chemical solution which crosslinks with collagen, but is not by itself a curable solution.

In contrast to Leschinsky's non-curable solution of solution of glutaraldehyde or carbodiimide for interacting with collagen in a vessel lumen, Hubbell is directed to curable biomaterials. (Hubbell, column 1, 67, to column 2, line 1). Hubbell, teaches that pentaerythritol tetra 3(mercaptopropionate) is to be combined with a particular polyethylene glycol diacrylate, i.e., a polyethylene glycol diacrylate having a molecular weight of 570. (Hubbell, column 65, lines 35-37). Even when a 20,000 molecular weight polyethylene glycol diacrylate is considered by Hubbell, Hubbell specifically teaches that its composition must necessarily still contain the 570 molecular weight polyethylene glycol diacrylate, as follows:

Low molar content of a larger molecular weight precursor (i.e., PEGDA 20,000 ...) can replace some of the PEGDA 570, creating a bimodal system. (Hubbell, column 68, lines 22-24)(emphasis added)

Thus, Hubbell fails to teach or suggest an embolic material comprising polyethylene glycol diacrylate where the polyethylene glycol diacrylate comprises a molecular weight between 700 and 800, as set forth in independent claims 31 and 45. Moreover, Hubbell further fails to teach or suggest an embolic material comprising polyethylene glycol diacrylate where the polyethylene glycol diacrylate consists essentially of polyethylene glycol diacrylate having a molecular weight between 700 and 800, as set forth in dependent claims 41 and 51.

The only teaching of an embolic material comprising polyethylene glycol diacrylate where the polyethylene glycol diacrylate comprises a molecular weight between 700 and 800 or an embolic material comprising polyethylene glycol diacrylate where the polyethylene glycol diacrylate consists essentially of polyethylene glycol diacrylate having a molecular weight between 700 and 800 is the subject application. To be of any use in the office action, the Examiner must modify the teachings of Hubbell to exclude its necessary molecular weight polyethylene glycol diacrylate and then modify the molecular weight in an attempt to read on the claims of the present invention. It is well established, however, that hindsight reconstruction of a reference does not present a *prima facie* case of obviousness and any attempt at hindsight reconstruction using Applicants' disclosure is strictly prohibited. *In re Oetiker*, 24 U.S.P.Q.2d 1443, 1445-46 (Fed. Cir. 1993).

As the only teaching of embolic materials having polyethylene glycol diacrylate of the claimed molecular weight is the Applicants' specification and further as Hubbell teaches away from embolic materials not having polyethylene glycol diacrylate of a 570 molecular weight, it is respectfully submitted that Hubbell in combination with Leschinsky fails to teach or suggest the subject matter as presently defined in independent claims 31 and 45.

Thus, it is respectfully submitted that claims 31-33, 35, 36, 40-46 and 50-54 are patentably distinct over Leschinsky and Hubbell, individually or in combination.

Reconsideration and withdrawal of the rejection submitted that claims 31-33, 35, 36, 40-46 and 50-54 are respectfully requested.

Claims 37, 38, 48, 49 and 56-65 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Leschinsky in view Hubbell and further in view of U.S. Patent No. 5,646,007 to Enomoto et al. (hereinafter "Enomoto"). Applicants respectfully traverse.

Enomoto merely teaches that HEPES or glycylglycine may be used as buffers to control the pH of a thrombin reagent and a chromogenic substrate reagent. (Enomoto, column 5, lines 40-44). It is respectfully submitted that the control of pH of solutions of thrombin and chromogenic substrate reagents would not provide motivation to one of ordinary skill in the art to modify the teachings of Leschinsky and/or Hubbell, individually or in combination, to arrive at, *inter alia*, the specifically defined curable embolic materials of the present invention, including, *inter alia*, the claimed buffers of independent claim 56, as Enomoto fails to teach or suggest that its buffers may be used with the claimed constituents and/or may be used *in vivo*.

Furthermore, Enomoto fails to cure the deficiencies of Leschinsky and Hubbell. For example, Leschinsky, Hubbell and Enomoto, individually or in combination, fail to teach or suggest, *inter alia*, an embolic material comprising polyethylene glycol diacrylate where the polyethylene glycol diacrylate comprises a molecular weight between 700 and 800, as set forth in independent claim 56, and/or an embolic material comprising polyethylene glycol diacrylate where the polyethylene glycol diacrylate consists essentially of polyethylene glycol diacrylate having a molecular weight between 700 and 800, as set forth in dependent claim 63.

Thus, it is respectfully submitted that claims 37, 38, 48, 49 and 56-65 are patentably distinct over Leschinsky, Hubbell and Enomoto, individually or in combination. Reconsideration and withdrawal of the rejection submitted that claims 37, 38, 48, 49 and 56-65 are respectfully requested.

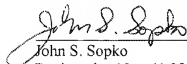
Summary

Therefore, Applicants respectfully submit that independent claims 31, 45 and 56, and all claims dependent therefrom, are patentably distinct. This application is believed to be in condition for allowance. Favorable action thereon is therefore respectfully solicited.

Should the Examiner have any questions or comments concerning the above, the Examiner is respectfully invited to contact the undersigned attorney at the telephone number given below.

The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication, or credit any overpayment, to Deposit Account No. 08-2461. Such authorization includes authorization to charge fees for extensions of time, if any, under 37 C.F.R. § 1.17 and also should be treated as a constructive petition for an extension of time in this reply or any future reply pursuant to 37 C.F.R. § 1.136.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "John S. Sopko", is written over a horizontal line.

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